



SOIL HEALTH NEWS

2018 – Volume 3, Number 1



Dear Friends:

It is a pleasure to offer this first newsletter of 2018 from your Soil Health Institute. I have high hopes and expectations for all that we can accomplish by working together in the coming year.

I'm happy to report that the Action Plan so many of you helped develop is serving us well by guiding our efforts in a strategic, coordinated manner. With over 150 volunteers serving on Institute Action Teams, significant progress is being made. One team has developed a searchable, interactive, map-based calendar to expand communication of soil health-related events on a global scale. Another team is identifying changes needed in nutrient recommendations to help improve farm economies and reduce nutrient losses. Others are developing K-12 soil health curricula to increase public understanding and appreciation for the importance of healthy soils, and cataloging state-level soil health legislation and programs so their successes can be emulated by others. These are just a few of the inspiring accomplishments made possible through the dedication of

volunteers addressing such important issues. If you would like to get involved in an Action Team, there are many topics from which to choose, and the door is always open! Please contact us [here](#).

Please also know that your staff at the Soil Health Institute are doing everything we can to help support you. Towards this end, we recently acquired a knowledge-sharing platform called "**Bloomfire**" to help facilitate communication, synergy, and progress both within and across Action Teams. We will continue to invest in such opportunities to ensure your success.

There is much to be done, but it is good work, and this is our time to make a difference.

With deepest appreciation,

C. Wayne Honeycutt, Ph.D.
President and CEO

P.S. Please be sure to join us for the third Annual Meeting of the Soil Health Institute, August 1-3, in Albuquerque (immediately following SWCS in the same venue).

Join Us in Albuquerque

[Conference Registration](#) is now open for the **Soil Health Institute's 3rd Annual Meeting August 1-3**. You'll also find a convenient link to hotel reservations on the registration form.

PLENARY TOPICS

- Corporate Sustainability and the New Carbon Currency
- Enhancing the Research – Farmer Connection
- Soil Health – Human Health Relations
- Assessing and Expanding Adoption of Soil Health Systems
- Unleashing the Phytobiome to Build Soil & Plant Health
- Methods for Measuring Soil Health
- Natural Language Processing & Research Landscape Tool
- State Programs for Advancing Soil Health



A complete agenda will be available in April.

soilhealthinstitute.org

FFAR Awards \$9.4 Million to Spur Next Leap in Agriculture

On Dec. 5, 2017, World Soil Day, the Foundation for Food and Agriculture Research announced a \$9.4 M grant to the Soil Health Institute, Soil Health Partnership, and The Nature Conservancy. The goal of this project is to support collaborative research and education that accelerates the adoption and benefits of soil health management systems on a national scale.

Dr. Paul Tracy named Project Manager for SHI's FFAR Grant



*Dr. Paul Tracy,
Project Manager – Soil
Science/Agronomy*

After a national search, the Soil Health Institute is pleased to announce that Dr. Paul Tracy will serve as a Project Manager for managing the daily activities of SHI's FFAR Grant. Dr. Tracy has a 32-year career serving both public and private sectors with roles as the Director of Agronomy – Ostara Nutrient Recovery Technologies; Professional Agronomist, Pacific Northwest – WinField Solutions; Director of Agronomy Services – MFA Incorporated; and Assistant/Associate Professor – University of Missouri. Dr. Tracy was elected Chairman to both the Missouri and International Certified Crop Advisor Boards and received the 2015 American Society of Agronomy, Agronomic Achievement/Agronomic Industrial Award. He has a B.S. in Agriculture (Soils Option) from Montana State University, an M.S. in Soil Chemistry from the University of Idaho, and a Ph.D. in Agronomy/Soil Science from Colorado State University. Paul can be reached at ptracy@soilhealthinstitute.org.

Soil Health & Water Quality in the Mississippi River Basin

In Dec. 2017, SHI was awarded \$323,000 from the [Walton Family Foundation](#) to evaluate the relationships between soil health and edge-of-field water quality at experimental sites in the Mississippi River Basin. Funding for this 18-month project will be used to sample and analyze soils for Tier 1 soil health indicators and engage each site's principal investigator to evaluate the relationships between soil health and edge-of-field water quality. The goal is that this project will serve as a "proof of concept" to be refined and expanded to other water quality monitoring sites across North America.



Collaborators will take an integrated, three-pronged approach. The Soil Health Institute will identify and develop soil health measurements and relate soil health evaluation to productivity, economic and environmental outcomes; the Soil Health Partnership will implement and evaluate soil health promoting practices on working farms; and The Nature Conservancy will work with non-operator landowners to encourage use of science-based soil health practices. Read the [press release](#) and download the [fact sheet](#).



Natural Language Processing Update

The Soil Health Institute, the American Society of Agronomy, Crop Science Society of America, Soil Science Society of America and LUM.AI have partnered on a global soil health project that uses natural language processing (NLP) and machine learning (ML) to accelerate the retrieval and use of soil health research. LUM.AI developed an NLP tool that takes



unstructured text and turns it into structured data. "We originally developed this natural language processing application for researchers at the U.S. Department of Defense's Defense Advanced Research Projects Agency (DARPA) and the Bill and Melinda Gates Foundation to help identify causal pathways in cancer research and children's health," said Mihai Surdeanu, co-founder of LUM.AI.

It achieves levels of interpretation and precision that are statistically similar to humans, but unlike humans who can become fatigued and bored, the computer's process is sustainable for an unlimited number of papers. "The application will be beneficial for identifying gaps in soil health research and expanding the utility of the [Soil Health Research Landscape Tool](#)," explains Dr. Steven Shafer, Chief Scientific Officer of the Soil Health Institute. Read the [full release](#).

Ecosystem Services Market, Congressional Briefing and RFD TV

SHI is working alongside numerous organizations led by the Noble Research Institute to develop an [Ecosystem Services Market](#). SHI also had the honor of participating in a [congressional briefing](#) on soil health in February, and recently collaborated on a [soil health program](#) for RFD TV's television series, *American Farmer*.

Soil Health Institute Action Team Highlights

Action Teams Share SHI's Bloomfire Platform

Thanks to many dedicated volunteers, 24 Action Teams are currently addressing priorities for advancing soil health, as detailed in the SHI Action Plan. To facilitate discussion and collaboration among and within these Action Teams, SHI has installed an online platform called Bloomfire. The purpose of Bloomfire is to bring all soil health information and collaborative projects into a single, online repository specially designed for sharing information. Features of this platform include reviewing and editing documents; keyword searching through the same system used in Google Search; posting video and spreadsheets; commenting and asking questions quickly while maintaining the archived path; and more.

Bloomfire is somewhat similar to other file-sharing sites, yet Bloomfire stands apart due to its ease of use, intuitive design and customizable features. For questions regarding Bloomfire, please contact Byron Rath at brath@soilhealthinstitute.org.

► Communications & Education

The Communications and Education Action Team recently created a searchable and interactive map-based [calendar](#) of soil health events at the county, state and national and international level. The Institute's Action Team invites all members of the soil health community to submit any conferences or field days that are currently unlisted using the [link](#) at the bottom of the website.

The Communications & Education Action Team identified 26 individual soil health curriculum resources for K-12 students and adults, and is working to finalize this list. These resources will be categorized by organization, grade level and content and will be available on the SHI website in the RESOURCES section.

► Policy

The Policy Action Team is tracking soil health policy efforts throughout the United States. Several states have passed legislation either specifically setting up soil health programs or supporting improved soil health by encouraging efforts to sequester carbon. Those states include Maryland, California, Oklahoma, Utah and Hawaii. Legislative proposals on soil health have been introduced but not yet passed in Massachusetts, New York and Vermont. Additionally, there are reported drafting efforts on soil health legislation in Illinois, Ohio, Iowa and Connecticut. Even in the absence of such legislation, other states are taking administrative action on

soil health through new state agency programs. Missouri, for example, is investing more than \$4 million per year in cover crop and soil health cost-share through a state Soil and Water program. The Policy Team plans to publish this catalog of soil health policy initiatives on the SHI website and update it as progress is made. Thanks to Jamie Fanous at Tufts University who is leading the effort to compile this and other relevant information on such state soil health initiatives.

► Research

The Research Team is conducting a search for all recent research data on management systems for imparting soil-borne disease suppression.

The Research Team has identified the most pressing current gaps and discrepancies in nutrient recommendations across states/regions. A white paper is planned to document the current status of P and K recommendations so future nutrient calibration strategies can be developed. The Action Team has initiated the regional communications needed to add clarity and regional adaptation to this effort.

► Measurements, Standards & Assessment

The Measurements Team has drafted a paper that unifies several SHI-sponsored straw papers on Tier 2 measurements into a single document. Numerous federal, private, and university scientists contributed to those straw papers, first presented at SHI's 1st Annual Meeting in 2016.

► Economics

The Economics Team has developed a plan for a partial budget format for comparing economics of soil health-promoting practices/systems that can be used across a range of production systems and inputs (e.g., manured vs. non-manured; no-till vs. moldboard plow). This includes summarizing what is known; modifying the SHI repository to include more extension trials; collecting more economic data, i.e., from seed companies; adapting LGU crop budgets to create "soil health" versions illustrating costs avoided by implementing sound soil health practices; and adding avoided cost questions to the annual SARE Cover Crops survey.

To learn more about specific Action Team efforts, ask questions, offer suggestions, and collaborate with other soil health leaders, please log in to the Institute's [Bloomfire Platform](#). To participate in an Action Team, please contact us [here](#).

Thank You to Action Team Volunteers

The Soil Health Institute would like to thank all Action Team Volunteers for their insights, ideas, expertise and continued contributions in support of soil health – many of whom have been working since 2013 to identify the needs, priorities and actionable steps to enhance soil health in Research; Measurements, Standards & Assessment; Economics; Policy; and Communications & Education.

► RESEARCH

Veronica Acosta-Martinez
Talon Becker
Humberto Blanco-Can
Russell Briggs
Tom Bruuslema
John Buck
Miguel Cabrera
Lynn Carpenter-Boggs
Dorn Cox
Joe Dedman
Paul DeLaune
Kerri Foster
Dory Franklin
Alan Franzluebbbers
Rajon Ghimire
Wendell Gilgert
Ken Greer
Lance Gunderson
Sarah Hetrick
Kyle Horton
David Huggins
Dave Huggins
Brad Joern
Doug Karlen
Dave Knabel
Mark Liebig
Ellen Maas
Dan Manter
Klaas Martens
Alan Merrill
Ali Mohamed
Cristine Morgan
LaKisha Odom
Deanna Osmond
Keith Paustian
Tom Ruff
Gretchen Sassenrath
Richard Teague
Janice Thies
Kristen Veum
Michelle Wander
Hailin Zhang

► MEASUREMENTS, STANDARDS & ASSESSMENT

Veronica Acosta Martinez
Banks Baker
Barbara Bellows
Karen Brinkman
Barbara C. Bellows
Chelsea Carey
Michael Castellano
Amy Charkowski
Nick Cuchetti
Steve Culman
Daniel Davidson
Jeff Dearborn
Howard Ferris
Judith Fitzpatrick

Scott Fleming
Alan Franzluebbbers
Jim Fredericks
Mitchell Hora
Will Horwath
Russ Ingham
Kirk Iverson
Doug Karlen
Robert Larkin
Nathan Long
Dan Manter
Zouheir Massri
Zouheir Massri
Elyssa McFarland

Maysoon Mikha
Randy Miles
Jennifer Moore-Kucera
Leigh Morrow
Stephen Murhpy
Stephanie Murphy
Dave Myrold
Manjula Nathan
Deb Neher
Patrick O'Neil
Deanna Osmond
Sarah Pacella
Eugenia Pena-Yewtukhiw
Michelle Perez

Sarah Placella
Tony Provin
Aaron Ristow
Aaron Ristow
Michael Robotham
Andrew Sharpley
Diane Stott
Janice Thies
Allison Thomson
Carmen Ugarte
Victoria Vegis
Skye Wills
Doug Wysocki
Yamily Zavala

► ECONOMICS

Dianna Bagnall
Matt Bechdlol
Sean Bloszies
Maria Bowman
Becky Doyle
Chris Fennig
Robert Foster
Nick Goeser
Doug Gucker
Jerry Hall
Sheldon Jones
Doug Lawrence
Richard Lyons
Paul Marsh

Cristine Morgan
Tim Nerbas
Dan Northrup
Michelle Perez
Debbie Reed
Anita Regmi
Kris Reynolds
Cody Rice
Wendi Rogers
Dave Stark
Wally Tyner
Renee Vassilos
Michelle Wander
Steve Wiest
Colton Young

► POLICY

Alyssa Charney
Pipa Elias
Gary Farrell
Craig Ficenc
Timothy Griffin
Steve Groff
Diane Herndon
Matt Hill
Diana Jerkins

Bruce Knight
Andy LaVigne
Kristie Maczko
Sean McMahon
Jeff Moyer
Rob Myers
Annie Shapiro
Ryan Stockwell
Caroline Wade

► COMMUNICATIONS & EDUCATION

Lynn Bahrych
Lisa Bellows
Sarah Blaney
Monte Bottus
Ashley Cox
Nancy DeLong
Reid Detchon
Jen Filipiak
Hunter Francis
Earl Garber
Jenna Higgins Rose
Amanda Hill
Lisa Holscher
Jim Johnson

Scott Jones
Kurt Lawton
Ron Nichols
Byron Rath
Jodie Reisher
Tyler Reynolds
Sid Reynolds
Gretchen Sassenrath
Kate Schaffner
Susan Schultz
Kim Sheese
Luther Smith
Steve Swaffar
Sami Tellatin

A Call for Soil Health Book Worms

Attention all! We need your help in developing a list of books for those interested in learning more about soil health. Please send us your recommendations [here!](#)



© 2018 Soil Health Institute. All Rights Reserved.



2803 Slater Road | Suite 115 | Morrisville, NC 27560 | 919-230-0303

